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Washington, D.C.

Final Report

Site Inspection

Antelope Valley Pesticide Container Disposal Site

Lander County
Nevada

December, 1988

WESTON
MANAGERS DESIGNERS/CONSULTANTS

FINAL
SITE INVESTIGATION REPORT
ANTELOPE VALLEY PESTICIDE CONTAINER DISPOSAL SITE
LANDER COUNTY

Prepared for
The United States Department of Interior
Bureau of Land Management

BLM Contract Number AA852-CT8-14

Prepared by
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SECTION 1
SUMMARY

A site investigation was conducted at the two-acre Antelope Valley Pesticide Container Dumpsite located about 42 miles south of Battle Mountain in Lander County, Nevada. Surface soil samples were collected on May 19, 1988 from areas on the site thought to represent the highest potential for pesticide/herbicide contamination. Site conditions were observed and documented, available records were reviewed, an EPA site inspection report (form 2070-13) was completed, and an EPA Hazard Ranking System (HRS) was applied to the site.

1.1 DEGREE OF RISK TO HUMAN HEALTH AND THE ENVIRONMENT

Organochlorine pesticides, PCBs and organophosphorous pesticides were not detected in soil samples collected during the Antelope Valley site investigation. Volatile organic compounds (acetone, chloroform, 1,1 dichloroethene, trichloroethene, benzene, toluene and methylene chloride) were reported at very low concentrations, but the results are suspect since they occur in the lab blank and/or the upgradient, background sample, or occur below the detection level. Alpha endosulfan and chloroform were discovered during the Preliminary Assessment (PA) (AEPCO,1987), but since they were not identified in the site investigation, the results probably were a result of sampling shortly after an episode of disposal.

No surface water or groundwater was encountered during the on-site activities, but groundwater is used extensively downgradient for domestic, irrigation and stock purposes. Bedrock is very shallow below the site occurring at the base of the disposal pit at around 10 feet. The alluvium thickens north and east of the site, and several water wells have been identified which tap the alluvium around 110 feet. The ephemeral Cain Creek flows northeasterly around 0.25 miles north of the site.

The chemical results indicate significant soil contamination does not exist at the site. Based on these results, the low annual rainfall (around 7 inches) and the buffer distance of one mile to the nearest well indicate that a threat to human health or the environment does not exist. However, improper disposal practices including the observed presence of liquids within several glass containers were identified during the site investigation.

The site has been ranked as Class II and has been given an HRS score of 7.38. This classification and score reflect that soil contamination has not been identified and only empty, potentially contaminated pesticide containers are present. The presence of a small quantity of unknown liquids within the one-gallon jars labeled Dibrom 8 Spray was a major factor in the HRS score. Dibrom 8 Spray contains naled which is categorized as extremely toxic thus producing the high HRS score. Naled is an organophosphorus compound used in pesticides and acaricides.

1.2 RESPONSIBLE PARTIES AND OFF-SITE CONTRIBUTORS

The Antelope Valley Pesticide Container site was provided by the Bureau of Land Management (BLM) to the Lander County Commissioners since October 1, 1971 under an indefinite Special Land Use Permit (SLUP) # N6-72-11. Lander County has been the sole operator. Specific contributors disposed of the containers under county management. No off-site contributors of hazardous substances are known or suspected.

1.3 RECOMMENDED ACTIONS

The site investigation results of the Antelope Valley Pesticide Container Dump indicate no soil contamination exists. However, soil contamination was identified during the October, 1986 sampling for the PA, and liquid is present in several glass containers within the pit. The waste must therefore be considered hazardous and the potential for migration of chemical constituents to a shallow aquifer exists.

Groundwater and surface water were not encountered, but groundwater is used extensively down-gradient for domestic, irrigation and stock uses. The nearest down-gradient well is shown on the Mt. Moses Quadrangle (USGS, 1961) approximately one mile east of the site. Since disposal practices are poorly managed and are not in accordance with proper containment protocols (40 CFR Part 265.300), WESTON recommends the following:

- Remove all liquids;
- Post warning signs and inspect the perimeter fence periodically;
- Conduct site survey to delineate trench boundaries and identify possible sumps; and
- Close the existing disposal pit.

SECTION 2
SITE BACKGROUND INFORMATION

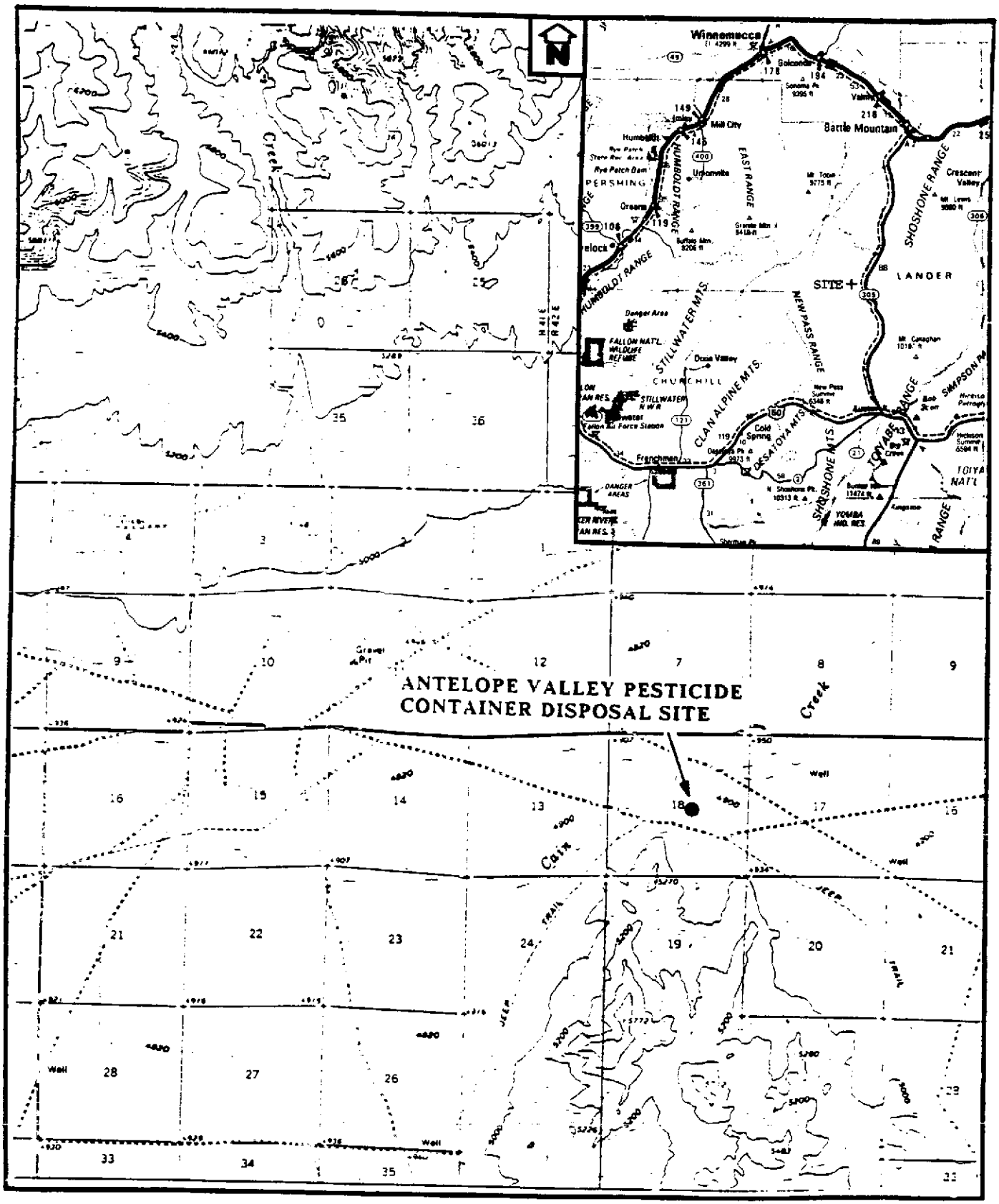
2.1 LOCATION

The Antelope Valley Pesticide Container Disposal Site is located within the Antelope Valley in Lander County, Nevada at latitude 40°02'30" N and longitude 117°14'30" W (Figure 2-1). The site, as shown on the 15-minute Mt. Moses Quadrangle map (USGS, 1961), is located approximately 5.5 miles west of Route 305 (or Route 8A), which connects the Towns of Battle Mountain and Austin. The Town of Austin, near the interchange of Routes 305 and 50, lies approximately 47 miles south of the site. Battle Mountain, adjacent to the interchange of Route 305 and Interstate 80, lies approximately 42 miles north. The legal description of the site is NW 1/4 SE 1/4, Section 18, Township 25 N, Range 42 E, MDM. The site lies at the end of an unimproved access road approximately 0.5 miles south of the county road leading to Antelope Valley.

2.2 SITE DESCRIPTION

The site is located at the northern end of what is known as the Bridges Hills at an approximate elevation of 4,920 feet above mean sea level (Figure 2-1). Slope at the site is from west to east (away from the Bridges Hills) at about 12%. The major topographic feature in the area is Antelope Valley which is drained by the ephemeral Cain Creek. The main axis of Antelope Valley occurs west of the site and is bounded by the Augusta Mountains on the west, the Fish Creek Mountains on the north and the Bridges Hills on the east. The valley narrows as it bends eastward around the Bridges Hills, opening again into the Middle Reese River Valley. Cain Creek lies approximately 0.25 miles north of the site and flows northeasterly into the Reese River which in-turn flows northward toward Battle Mountain.

The region has an arid climate receiving between 6 and 16 inches average precipitation per year. The average annual temperature is around 48°F, but freezing temperatures have been recorded in every month of the year, and as much as 130 degrees difference between the high and the low have been recorded. The air is generally clear, but "dust devils" and



SOURCE: USGS QUADRANGLE MAP (Mt. Moses, NV 15-Minute Series Quadrangle Map)

0 1.0 2.0 MILES

FIGURE 2-1 SITE LOCATION MAP

strong winds are common throughout the spring, summer, and fall. Winds are mainly from the southwest. The vegetation consists of shadscale, low sage, rabbit brush, and bud sage with an understory of squirreltail, cheatgrass, and Indian ricegrass. Some of the forbs in the understory are wild mustard and halogeton (Zieg, 1971).

2.3 SITE LAYOUT

The site is encircled by an 8-foot woven wire fence with an additional two strands of barbed wire strung between back-breakers (angulars) on the top of each post (Figures 2-2 and 2-3a). Access to the site is through a locked gate located in the northeast corner. The key to the lock is under the custody of the Lander County Commissioner, but was made available to a representative of the BLM Battle Mountain District who was present for the on-site activities. The gate and fence are in good condition, but lack posted warning signs. The fence is 417 feet x 209 feet occupying two acres of BLM-owned land. A one to two- foot earth berm surrounds the fence to divert surface runoff around the site.

The site contains one disposal trench approximately 35 feet away from the western fence (Figure 2-3b). The trench is approximately 119 feet x 27 feet x 10 feet with an additional 37 feet of backfilled material on the northern end. The trench is ramped to the south, and present disposal is confined to the northern 20-25 feet. Lack of any rubbish other than the permitted containers indicates the site adequately restricts general public access. Two empty storage sheds and a trellis suspected to be used for rinsing the empty pesticide/herbicide containers are located near the northern fence. Shed #2 has been upset and appears to have moved. No sumps were identified and it is unknown if additional sumps are planned.

2.4 SITE HISTORY

The two-acre parcel of BLM-owned land in Antelope Valley was selected in 1971 for disposal of empty pesticide/herbicide containers. The application for a Special Land Use Permit (SLUP) containing a Statement of Environmental Impact-Draft (Zieg, 1971) was submitted to the BLM in September, 1971 by the Lander County Commissioners. The SLUP was approved for one year in October, 1971 and extended indefinitely in January, 1973. In 1985, BLM proposed the sale of the property to Lander County under Sections 206 and 209 of the Federal Land Policy and Management Act (1976) (Kershaw, 1988). The land was appraised and a Preliminary Assessment (PA) Report on the hazards was generated (AEPCO, 1987).

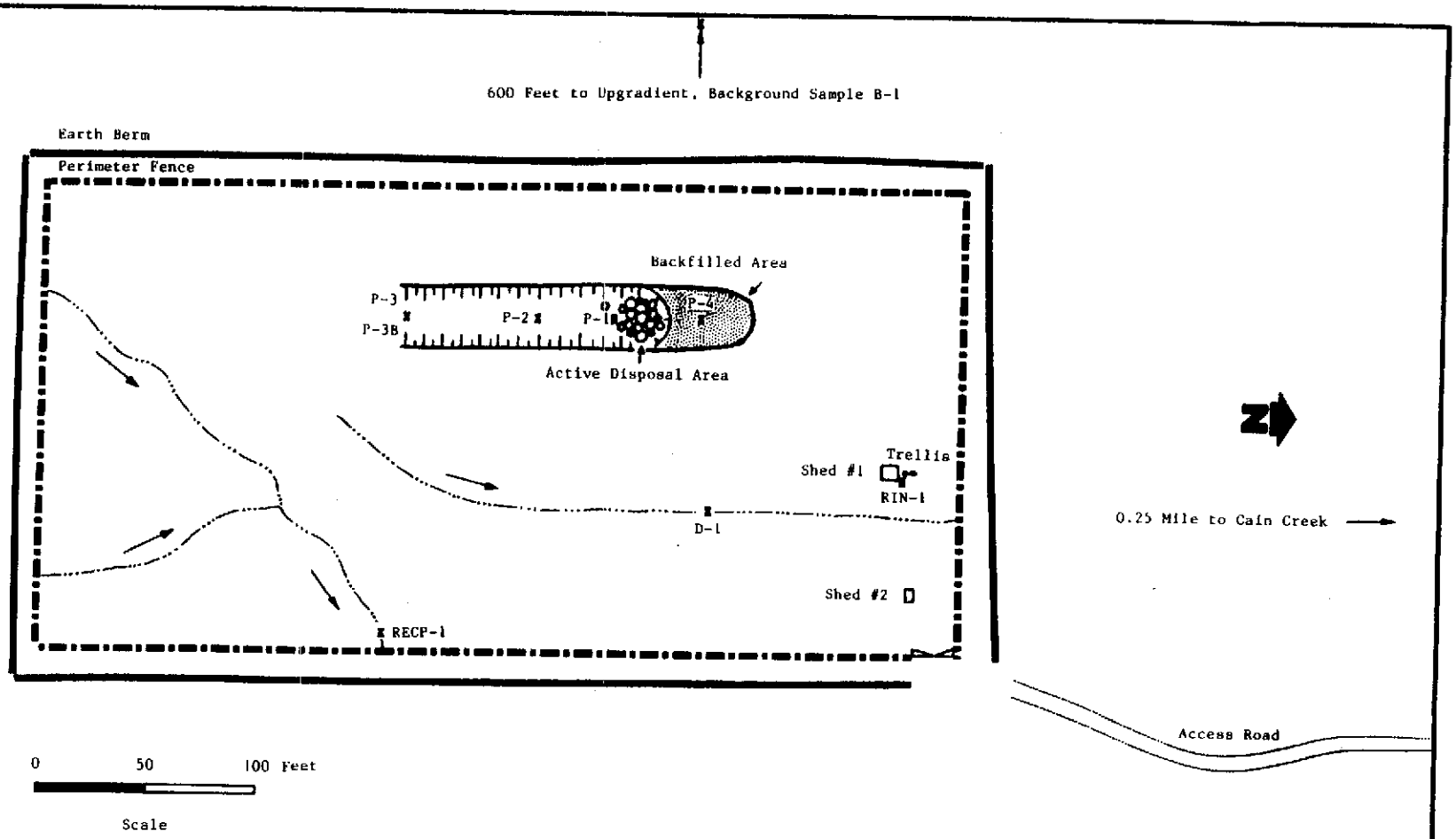


FIGURE 2-2 SITE LAYOUT

Surface Drainage

Sample Location

ROY F. WESTON, INC.

DRAWN JLB	DATE 7-22-88	DES. ENG.	DATE	W. O. NO. 2878-05-07
CHECKED		APPROVED		DWG. NO.

Figure 2-3a Antelope Valley Site. View is southwest with the Bridges Hills in the background.

Figure 2-3b Active Disposal Pit. View is northeast.

Payment was made to the BLM in October, 1986 for the 12.5 acres containing the site, but final patent was not issued. WESTON was retained in 1988 to conduct a Site Inspection prior to issuing the patent. A detailed chronology of site events is available in the PA (AEPCO, 1987).

SECTION 3
SCOPE OF EVALUATION AND ANALYTICAL EFFORT

3.1 BACKGROUND DATA ACQUISITION

Available background data obtained from the Bureau of Land Management (BLM) District Offices in Reno and Battle Mountain include:

- Site maps, regional maps;
- Specifications for Agricultural Chemical Container Disposal Pits (Smith, 1970);
- Statement of Environmental Impact-Draft (Zieg, 1971);
- Original Special Land Use Permit (SLUP)(1971) and extension (1973);
- Preliminary Assessment (PA) Report (AEPCO, 1987); and
- Case history and appraisals.

3.2 ENVIRONMENTAL MONITORING AND SAMPLING PROGRAM

The objective of the site monitoring and sampling program was to observe and document on-site conditions and to safely and representatively sample all potentially hazardous materials. Efforts were directed at obtaining information that could be used to develop plans for possible remedial actions, and to assist in cost recovery from potentially responsible parties.

Initially, an off-site reconnaissance survey was conducted around the perimeter and in the general vicinity of the site. The general layout of the site was observed and mapped. No evidence for off-site migration of contaminants, or hazardous conditions were noted.

Available background information on the Antelope Valley site indicates that approximately 79 empty pesticide containers have been disposed of in a trench at the site. Analytical results of soil samples collected during PA activities detected low levels of volatile organic, pesticide, and metallic compounds. The inorganic compounds (metals and cyanide) were below EP Toxicity RCRA standards. The contaminants of concern were alpha endosulfan and chloroform detected at 70 and 3 ug/kg, respectively.

The SI sampling plan focused on areas of the site thought to represent the highest potential for pesticide/herbicide contamination. Nine discrete surface samples were obtained during the investigation. Five were collected from the pit area corresponding to Stations 02-05 of the PA (Figure 2-2 and AEPCO, 1987). Three more samples were collected within the site; one near the rinsing station and two in shallow rills draining the site. One sample was collected on the ridge west of the site to obtain background level for quality assurance. Samples were collected one to two feet below the surface using a stainless steel hand auger and placed directly into eight ounce laboratory-cleaned glass jars with teflon-lined lids. Two samples within the pit (AV-P-1 and AV-P-2) were obtained from the upper few inches of soil due to the shallow depth to bedrock. Bedrock was not encountered at the southern end of the pit nor in the other samples. Sample AV-P-3 and AV-P-3B were taken from the same hole, at the surface and at 1.5 feet respectively. The samples were stored on ice and shipped according to U.S. EPA chain-of-custody procedures (Appendix B). Samples consisted of poorly sorted sand and gravel.

3.3 SAMPLING RESULTS

Two sampling episodes were conducted at the site for the PA (AEPCO, 1987). Grab samples were composited to form samples WS-A (1/14/86) and WS-B (10/15/86).

PARAMETER	WS-A	WS-B
Alpha Endosulfan		70 ug/kg
Benzoic acid		1570 ug/kg
Chloroform		3 ug/kg
Cyanide		<0.5 mg/kg
Silver	10 ug/l	
Arsenic	24 ug/l	
Barium	327 ug/l	
Cadmium	<5 ug/l	
Chromium	<10 ug/l	
Mercury	<0.2 ug/l	
Lead	5 ug/l	
Selenium	<5 ug/l	

The two composite samples were taken at the same sample location with the exception of Station 02 that was not included in WS-B. Only inorganic compounds were detected at low concentrations in WS-A, where only low concentrations of organic compounds were detected in WS-B.

Benzoic acid was identified below the laboratory detection level of 5000 ug/L and was not addressed in the PA (AEPCO, 1987). Since sample WS-B was a composite, the source and occurrence of benzoic acid is unknown. However, benzoic acid is used in perfumes, as tobacco seasoning and as a food preservative up to 0.1% (Van Nostrand Reinhold Company, 1981). Benzoic acid is not on the EPA Hazardous Substance List (HSL) and must be specified for laboratory analysis.

All nine samples for this investigation were analyzed by WESTON Analytics in Stockton, California for organochlorine pesticides, PCBs, volatile organic compounds and organophosphorous pesticides. No compounds were detected in any of the samples with the exception of methylene chloride, acetone, chloroform, 1,1 dichloroethene, trichloroethene, benzene and toluene which occur at very low concentrations (Table 3-1, Appendix A). Methylene chloride is a common lab contaminant and is present in both the lab blank and in the upgradient, background sample (AV-B-1). Acetone is also a common lab contaminant and is found in AV-B-1. Chloroform was identified below the laboratory detection level of 3 ug/L and was present in the lab blank and in sample AV-B-1. Trichloroethene, 1,1 dichloroethene, benzene and toluene were similarly identified below detection levels in sample AV-P-4. These values are reported with a "J" in the laboratory results (Appendix A) indicating the compounds meet the laboratory identification criteria, but occur below the practical qualification limit "J" valves are estimated, therefore, rather than accurately quantified. Reliable detection levels are based on the smallest concentration used for instrument calibration.

No soil contamination was identified during the site investigation activities. The occurrence of alpha endosulfan in the PA is probably due to the addition of about five new drums of Malathion between the January, 1986 (WS-A) and October, 1986 (WS-B) sampling activities as noted in the PA.

To assure that quality data were obtained, care was taken to avoid contamination of samples and cross contamination between samples. A dedicated effort was made to ensure representative samples were collected. Specifically, this involved using clean sampling equipment to begin with and decontaminating equipment between holes, careful sample handling, appropriate sample preservation, and stringent laboratory requirements.

A stainless steel hand auger was used for soil sampling to avoid cross-contaminating the samples. The auger was decontaminated after each use by a four step process:

- Trisodium phosphate wash;
- Potable water rinse;
- Distilled water rinse; and
- Allowing the auger to air dry.

Pertinent sample information was recorded in the site logbook. Soil samples were individually bagged, kept on ice, and shipped overnight to the laboratory. Sample labels were completed at the site and appropriate chain-of-custody procedures were followed. Chain-of-custody records are included in Appendix B. One upgradient, background sample was collected and the laboratory ran one lab blank for Quality Assurance/Quality Control measures.

TABLE 3-1
SUMMARY OF ANALYTICAL RESULTS

SAMPLE	LOCATION	DEPTH	PARAMETER	CONCENTRATION (ug/kg)
AV-P-1	In disposal pit, immediately south of containers	Surface	Methylene Chloride	8.0
			Acetone	35
			Chloroform	3.0
AV-P-2	In disposal pit, center	Surface	Acetone	13
			Chloroform	3.0
			Methylene Chloride	7.0
AV-P-3	South end of pit	Surface	Methylene Chloride	6.0
			Chloroform	3.0
AV-P-3B	Same as AV-P-3	1.5-2 feet	Methylene Chloride	8.0
			Acetone	22
			Chloroform	3.0
AV-P-4	Backfilled area	1-1.5 feet	Methylene Chloride	7.0
			Acetone	16
			1,1 Dichloroethene	3.0
			Chloroform	3.0
			Trichloroethene	2.0
			Benzene	3.0
			Toluene	3.0
AV-RIN-1	Between trellis and Shed #1	1.5-2 feet	Methylene Chloride	6.0
			Acetone	12
			Chloroform	3.0
			Toluene	2.0
AV-RECP-1	Lowest point in shallow receptor rill east of pit	1.5-2 feet	Methylene Chloride	6.0
			Chloroform	3.0

TABLE 3-1 (CONT'D)

AV-D-1	Shallow drainage rill along east fence	1.5-2 feet	Methylene Chloride Acetone Chloroform	8.0 21 3.0
AV-B-1	Upgradient, background; 600 feet west of site	1.5-2 feet	Methylene Chloride Acetone Chloroform	6.0 15 2.0

3.4 SITE AREA RECONNAISSANCE

The Antelope Valley site and vicinity was thoroughly traversed during the site investigation. No evidence of hazards which pose an immediate or long term threat to the public or environment were encountered.

Air quality monitoring with the HNu and the radiometer showed no above background readings anywhere on site.

SECTION 4
WASTE TYPES AND QUANTITY

4.1 LOCATION

The active disposal pit was the only area identified during the site investigation to contain hazardous chemicals. The active disposal pit is approximately 119 feet long with an additional backfilled section extending northward for approximately 37 feet. No other disposal pits were identified during the SI. The operating plan called for sumps to be constructed to collect water used to rinse the containers. No sumps were visibly identified during the SI. As noted, the waste containers occur only in the northern 20-25 feet of the pit.

4.2 FORM AND PHYSICAL STATE OF WASTE

No records of the quantity, types of containers or exact dates of disposal have been maintained on site. Containers vary from one gallon glass jars to five gallon plastic and steel buckets to 55 gallon plastic and steel drums. Site practices do not follow the operating procedure since many of the steel drums have not been crushed. The lack of identifiable sumps and over-all neglect of the sheds and rinse station area suggests the containers are not being rinsed on-site prior to disposal. Furthermore, approximately six glass one gallon jars labeled as Dibrom 8 Spray containing liquids were visibly identified in the pit. This occurrence is not in accordance with operating procedures and should be addressed. The soil at the backfilled section of the pit is settling around and into the containers posing the potential hazard of collapsing under site personnel.

4.3 QUANTITIES AND CONCENTRATIONS

Container disposal has been limited to approximately 60 feet of the northern end where over 100 containers are visible. The site has been in operation for 17 years. Except for the presence of alpha endosulfan during the PA, disposal practices do not appear to be contaminating the surrounding soils. However, samples have not been obtained at depth below the containers where contamination is most likely to occur.

4.4 EXISTING REGULATIONS

A review of specific guidelines or regulations governing "action levels" of contaminants in soil is unwarranted since all the results were "not detected". A review of regulations for owners and operators of facilities that dispose of hazardous waste in landfills (40 CFR 265.300) was conducted in conjunction with the potential hazardous waste identified in the glass containers. Depending upon amounts and contents in the glass containers, owners and operators of the Antelope Valley site may be required to conform to federal regulations governing disposal of hazardous waste in landfills.

4.5 CONTAINMENT AND ACCESSIBILITY

The disposal pit is not lined and is constructed within native soils at the site. The pit does not contain a leachate collection system and it has been inadequately backfilled with native soil. The fence and gate are sufficient for limiting access, but warning signs should be posted.

SECTION 5
EFFECTS ON HUMAN HEALTH AND THE ENVIRONMENT

5.1 SITE LAND USE, DEMOGRAPHICS, AND THE ENVIRONMENT

Both farming and ranching activities are conducted in Antelope Valley and there are about 30 active facilities in the general area. The nearest farming occurs approximately 1.5 miles east of the site; another occurs about 2 miles north. Cultivated crops in the area include alfalfa, mint, and garlic. Both sheep and cattle graze the area which has a carrying capacity of 15 surface acres per animal unit month. Livestock using the area are sheep of the Ellison Ranching Company and cattle of Joe and DeMar Dahl. No range or livestock improvements are involved in the pesticide site, but stock trails and droppings are found surrounding the site.

The general area accommodates coyotes, bobcats, badgers, rabbits, and a variety of rodents. It is also the habitat of partridges and a variety of song birds. The site is within the home range of some of the more important birds of prey. The rare and endangered prairie falcon has been observed near the site as well as the golden eagle. Cain Creek has no known fish life but about one mile east of the disposal site, Cain Creek floods a 40 acre waste area. This waste area contains aquatic plants such as cattails and rushes which in turn provides nesting and resting habitat for a limited number of waterfowl (Zieg, 1971).

There are no trees growing at or near the disposal site and there are no known mineral deposits. The site is not within an identified recreation area, and there are no known archeological, historical or cultural sites near the site (Zieg, 1971).

5.2 SURFACE WATER CHARACTERISTICS AND USE

The site is located in Antelope Valley within the Great Basin hydrologic region and the north-Great Basin sub-basin. Antelope Valley is drained by Cain Creek which flows northeasterly into the Reese River. The normally dry Cain Creek flows only after intense thundershowers, during periods of extremely rapid snow melt, and during late summer, when it carries irrigation water from the farms in Antelope Valley (Zieg, 1971). In normal years, the Reese River does not flow its complete length on the surface. Most of the annual precipitation during September to May contributes to the flow. Thunderstorms in summer cause flash floods, local erosion, and crop damage (Zieg, 1971).

The watershed of the immediate area near the disposal site is less than 500,000 square feet, thus contributing a minor portion of runoff into Cain Creek compared with the whole watershed. The water within the watershed is being used for the irrigation of crops, stockwater and domestic purposes. Cattle were observed drinking from Cain Creek approximately 0.25 mile north of the site. The nearest fields which could draw on surface water for irrigation are approximately 1.0 mile northeast of the site. Uplift of the surrounding highlands is geologically fairly recent producing an unstable watershed. The geomorphology is young and large alluvial fans are evident at the mouths of drainages (Zieg, 1971).

No surface water was present on site. There are no surface water impoundments or reservoirs near the site (USGS, 1965).

5.3 GROUNDWATER CHARACTERISTICS AND USE

Groundwater was not encountered during the subsurface sampling activities. Therefore, the depth to the uppermost aquifer below the site has not been defined. Since bedrock occurs approximately 10 feet below the site, groundwater is probably not present in the alluvium except during periods of rapid precipitation. Groundwater flow is suspected to follow the surface water drainage flowing northeasterly into the Middle Reese River Valley.

Groundwater is used extensively for irrigation, domestic and stock uses. Zieg (1971) reports a depth-to-water of 20 feet immediately northwest of the site, dropping to 60 feet eastward toward Middle Reese River Valley. These depths were unsupported by a review of well records at the Nevada State Division of Water Resources. The Mt. Moses Quadrangle (USGS, 1961) shows a well approximately one mile east of the site in the SE 1/4 NW 1/4 SEC.17 (Figure 2-1), but no record of the well was found at the Nevada State Division of Water Resources. The nearest identified well is located in the SE 1/4 SE 1/4 SEC.17 (#24432), approximately 0.6 mile southeast of the site. The well was drilled to 245 feet and completed in the alluvium. Water occurs at around 115 feet and the water- bearing zone occurs between 110 and 225 feet. This well occurs lateral to the suspected groundwater flow direction and should not be effected by site activities.

Four wells were identified in Section 8, approximately 1-2 miles northeast of the site. With the exception of well #30764 which was drilled to 455 feet total depth of each well was around 240 feet with water occuring around 110-130 feet.

The total well depth of around 240 feet with a water-bearing zone between 110 and 130 feet is consistant between wells in Section 8 and 17 and is therefore considered representative of the groundwater in the area. Well #23754 has a static water level around 42 feet which is the shallowest depth-to-water encountered in Sections 8 and 17. This well may be tapping a localized perched zone.

The analytical results of the SI indicate soil contamination is not present on site. Considering the low average annual rainfall, buffer distance of 0.6 mile to the nearest well and a distance of 1 mile to the nearest downgradient well the possibility of contamination from the site in downgradient wells is low.

5.4 SOILS AND GEOLOGY

Soil types identified in and around the Antelope Valley Site include calcisol, humic clay, sandy regosols, sierozen, solonchak, and solonetz. The outstanding characteristics of these soils is the weak expression of soil development. In some locations, soluble salts have accumulated and calcium carbonate is usually present throughout the profile (Zieg, 1971). Soils on-site consist of poorly sorted sands and gravels typical of subaerial alluvial fan deposits. Cobbles are volcanic tuffs probably derived from the volcanic rocks capping the Bridges Hills. Soils on site and in the vicinity appear to be aridisol or mineral soils of arid climates, and suborder orthids or aridisols without clay accumulation (Brady, 1974).

Most of Nevada, including Lander County, is in the Basin and Range Province, which is physiographically characterized by block mountains and desert basins. The mountains are comprised of Paleozoic basement rock and overlying Tertiary volcanics uplifted along high angle, generally north-south trending faults. Quarternary Basin deposition generally consists of broad alluvial fan, valley fill and evaporite deposits.

The site is located on alluvial fan deposits above the valley fill. As noted, bedrock occurs at approximately 10 feet and is comprised of volcanic tuff.

5.5 ASSESSMENT OF WASTE MIGRATION

Organochlorine pesticides, PCBs, volatile organic compounds and organophosphorous pesticides were not detected in samples collected during the site investigation.

No surface water or groundwater was present and off-site migration or chemical compounds is not suspected.

5.6 ENVIRONMENTAL EFFECTS

No visible environmental effects such as stressed vegetation or animal mortality were apparent at the Antelope Valley site. Insects were observed crawling over the containers and numerous holes dug by burrowing rodents were noted on site. The effect continued disposal may have on wildlife in the area is unknown since current disposal practices are not monitored. The backfilled section of the trench poses a potential hazard of collapsing beneath site personnel.

SECTION 6
RESPONSIBLE PARTY INFORMATION

The Antelope Valley Pesticide Container Site has been leased by the Bureau of Land Management (BLM) to the Lander County Commissioners since October 1, 1971 under an indefinite Special Land Use Permit (SLUP) #N6-72-11. Lander County has been the sole operator. Specific contributors disposed of the containers under county management. There were no indications during the site investigation or in the files of any activities other than grazing prior to opening of the dumpsite. No potential off-site contributors are known or suspected.

SECTION 7
SUMMARY OF PAST RESPONSE ACTIVITIES

There have been no past attempts to remediate any perceived environmental problems at the Antelope Valley site with the exception of backfilling part of the pit. BLM conducted a Preliminary Assessment (PA) Study which included a limited amount of soil sampling. Analytical results of two composite samples (one collected in January, another in October, 1986) indicated low concentrations of alpha endosulfan and chloroform in the October samples. The occurrence of organic compounds can be explained by the addition of about five new drums of Malathion between the January and October sampling. The absence of organic compounds during the site investigation indicates the compounds volatilize easily and were probably only detected shortly after an episode of dumping.

SECTION 8
SITE CLASSIFICATION AND RANKING

The EPA Potential Hazardous Waste Site - Site Inspection Report (EPA Form 2070-13) for the Antelope Valley Pesticide Container Site is included in Appendix C. The Antelope Valley site has been ranked as a Class II site. The site has also been ranked using the Uncontrolled Hazardous Waste Site Ranking System (HRS). The HRS helps evaluate the relative potential of uncontrolled hazardous substance facilities to cause health or safety problems, or ecological or environmental damage. It is a means for applying uniform technical judgement regarding the potential hazards presented by the facility relative to other facilities. The HRS assigns three scores to a hazardous facility:

- S_M reflects the potential for harm to humans or the environment from migration of a hazardous substance away from the facility. Values are first assigned to the groundwater (S_{gw}), surface water (S_{sw}) and air (S_A) migration routes which are used to calculate the total potential migration score (S_M).

- S_{FE} reflects the potential for harm from fire and explosion with hazardous substances at the facility (i.e., no migration need be involved).

- S_{DC} reflects the potential for harm from direct contact with hazardous substances at the facility (i.e., no migration need be involved).

The score for each hazard mode (migration, fire and explosion and direct contact) or route is obtained by considering a set of factors that characterize the potential of the facility to cause harm. Although high values for S_{FE} and S_{DC} may indicate potential health hazards at a facility, only the S_M score is used for placing a site on the EPA National Priority List. The Antelope Valley site received the following scores:

$$S_M = 7.38$$
$$S_{FE} = N/A$$
$$S_{DC} = 0.28$$

A score of 28.5 for S_M places a facility of EPA's National Priority List. The HRS data sheets for the Antelope Valley site are included in Appendix D.

SECTION 9
RECOMMENDED ACTIONS

The site investigation results of the Antelope Valley Pesticide Container Dump indicate no soil contamination exists. However, soil contamination was identified during the October, 1986 sampling for the PA, and liquid is present in several glass containers within the pit. The waste must therefore be considered hazardous and the potential for migration of chemical constituents to a shallow aquifer exists.

Groundwater and surface water were not encountered, but groundwater is used extensively down-gradient for domestic, irrigation and stock uses. Since disposal practices are not in accordance with proper containment protocols (RCRA Reqs.), WESTON recommends the following:

- Remove all liquids;
- Post warning signs and inspect the perimeter fence periodically;
- Conduct site survey to delineate trench boundaries and identify possible sumps; and
- Close the existing disposal pit.

Several alternatives for the site survey and closure activities exist. The site survey is required mainly to identify possible sumps, but the trench boundaries should also be delineated. WESTON recommends contacting the operators of the dumpsite about rinsing procedures and conducting an Electromagnetic (EM) or Ground Penetrating Radar (GPR) survey to verify the existence of sumps.

WESTON recommends closure of the active disposal pit to restrict further waste accumulation. Closure activities should involve excavation of the containers and either transport and disposal at a permitted facility or re-disposal on site in a lined pit. Transport and disposal is more desirable to mitigate the long-term liability. Sampling beneath the excavated waste pile should be conducted to determine if contaminant migration has occurred. All the containers should be crushed to minimize settling of the backfill material and to keep burrowing animals from nesting in the drums.

REFERENCES

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APPENDIX A

ANALYTICAL DATA

WESTON ANALYTICS
VOLATILE ANALYTICAL DATA PACKAGE FOR
BLM - ANTELOPE VALLEY

DATE RECEIVED: 05/21/88

CLIENT ID	RFW BATCH NUMBER	COLLECTION	EXTR./PREP.	ANALYSIS
AV-P-1	8805-051-001	05/19/88	NA	06/02/88
AV-P-2	8805-051-002	05/19/88	NA	06/02/88
AV-P-3	8805-051-003	05/19/88	NA	06/02/88
AV-P-3B	8805-051-004	05/19/88	NA	06/02/88
AV-P-4	8805-051-005	05/19/88	NA	06/02/88
AV-RIN-1	8805-051-006	05/19/88	NA	06/02/88
AV-RECP-1	8805-051-007	05/19/88	NA	06/02/88
AV-D-1	8805-051-008	05/19/88	NA	06/02/88
AV-B-1	8805-051-009	05/19/88	NA	06/02/88
LAB QC:				
BLANK 06/02	8805-051-0001BL	NA	NA	06/02/88

WESTON Analytical Laboratories

DATE 6/19/88

WESTON ANALYTICS
GC/MS DATA SUMMARY
Volatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: 8805-051 Client: BLM - ANTELOPE VALLEY

Sample Information

RFW Batch ID:	8805-051-00018L	8805-051-001	8805-051-002	8805-051-003
Customer ID:	BLANK 06/02	AV-P-1	AV-P-2	AV-P-3
Matrix:	Water	Soil	Soil	Soil
Units:	UG/L	UG/KG	UG/KG	UG/KG
Dilution Factor:	1	1	1	1

Surrogate Recovery

Toluene-d8:	103 %	108 %	110 %	106 %
Bromofluorobenzene:	101 %	92 %	94 %	96 %
1,2-Dichloroethane-d4:	106 %	103 %	104 %	109 %

Analytes

Chloromethane	10 U	13 U	11 U	11 U
Bromomethane	10 U	13 U	11 U	11 U
Vinyl Chloride	10 U	13 U	11 U	11 U
Chloroethane	10 U	13 U	11 U	11 U
Methylene Chloride	5.0 J	8.0 B	7.0 B	6.0 B
Acetone	10 U	35	13	11 U
Carbon Disulfide	5.0 U	6.4 U	5.4 U	5.6 U
1,1-Dichloroethene	5.0 U	6.4 U	5.4 U	5.6 U
1,1-Dichloroethane	5.0 U	6.4 U	5.4 U	5.6 U
Trans-1,2-Dichloroethene	5.0 U	6.4 U	5.4 U	5.6 U
Chloroform	3.0 J	3.0 JB	3.0 JB	3.0 JB
1,2-Dichloroethane	5.0 U	6.4 U	5.4 U	5.6 U
2-Butanone	10 U	13 U	11 U	11 U
1,1,1-Trichloroethane	5.0 U	6.4 U	5.4 U	5.6 U
Carbon Tetrachloride	5.0 U	6.4 U	5.4 U	5.6 U
Vinyl Acetate	10 U	13 U	11 U	11 U
Bromodichloromethane	5.0 U	6.4 U	5.4 U	5.6 U
1,2-Dichloropropane	5.0 U	6.4 U	5.4 U	5.6 U
Trans-1,3-Dichloropropene	5.0 U	6.4 U	5.4 U	5.6 U
Trichloroethene	5.0 U	6.4 U	5.4 U	5.6 U
Dibromochloromethane	5.0 U	6.4 U	5.4 U	5.6 U
1,1,2-Trichloroethane	5.0 U	6.4 U	5.4 U	5.6 U
Benzene	5.0 U	6.4 U	5.4 U	5.6 U
cis-1,3-Dichloropropene	5.0 U	6.4 U	5.4 U	5.6 U
2-Chloroethylvinylether	10 U	13 U	11 U	11 U
Bromoform	5.0 U	6.4 U	5.4 U	5.6 U
4-Methyl-2-pentanone	10 U	13 U	11 U	11 U
2-Hexanone	10 U	13 U	11 U	11 U
Tetrachloroethene	5.0 U	6.4 U	5.4 U	5.6 U
1,1,2,2-Tetrachloroethane	5.0 U	6.4 U	5.4 U	5.6 U
Toluene	5.0 U	6.4 U	5.4 U	5.6 U
Chlorobenzene	5.0 U	6.4 U	5.4 U	5.6 U
Ethylbenzene	5.0 U	6.4 U	5.4 U	5.6 U
Styrene	5.0 U	6.4 U	5.4 U	5.6 U
Total Xylenes	5.0 U	6.4 U	5.4 U	5.6 U

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery.

WESTON ANALYTICS
GC/MS DATA SUMMARY
Volatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: 8805-051 Client: BLM - ANTELOPE VALLEY

Sample Information

RFW Batch ID:	8805-051-004	8805-051-005	8805-051-006	8805-051-007
Customer ID:	AV-P-3B	AV-P-4	AV-RIN-1	AV-RECP-1
Matrix:	Soil	Soil	Soil	Soil
Units:	UG/KG	UG/KG	UG/KG	UG/KG
Dilution Factor:	1	1	1	1

Surrogate Recovery

Toluene-d8:	109 %	107 %	107 %	108 %
Bromofluorobenzene:	98 %	96 %	100 %	93 %
1,2-Dichloroethane-d4:	110 %	90 %	118 %	113 %

Analytes

Chloromethane	13 U	11 U	11 U	10 U
Bromomethane	13 U	11 U	11 U	10 U
Vinyl Chloride	13 U	11 U	11 U	10 U
Chloroethane	13 U	11 U	11 U	10 U
Methylene Chloride	8.0 B	7.0 B	6.0 B	6.0 B
Acetone	22	16	12	10 U
Carbon Disulfide	6.3 U	5.7 U	5.6 U	5.2 U
1,1-Dichloroethene	6.3 U	3.0 J	5.6 U	5.2 U
1,1-Dichloroethane	6.3 U	5.7 U	5.6 U	5.2 U
Trans-1,2-Dichloroethene	6.3 U	5.7 U	5.6 U	5.2 U
Chloroform	3.0 JB	3.0 JB	3.0 JB	3.0 JB
1,2-Dichloroethane	6.3 U	5.7 U	5.6 U	5.2 U
2-Butanone	13 U	11 U	11 U	10 U
1,1,1-Trichloroethane	6.3 U	5.7 U	5.6 U	5.2 U
Carbon Tetrachloride	6.3 U	5.7 U	5.6 U	5.2 U
Vinyl Acetate	13 U	11 U	11 U	10 U
Bromodichloromethane	6.3 U	5.7 U	5.6 U	5.2 U
1,2-Dichloropropane	6.3 U	5.7 U	5.6 U	5.2 U
Trans-1,3-Dichloropropene	6.3 U	5.7 U	5.6 U	5.2 U
Trichloroethene	6.3 U	2.0 J	5.6 U	5.2 U
Dibromochloromethane	6.3 U	5.7 U	5.6 U	5.2 U
1,1,2-Trichloroethane	6.3 U	5.7 U	5.6 U	5.2 U
Benzene	6.3 U	3.0 J	5.6 U	5.2 U
cis-1,3-Dichloropropene	6.3 U	5.7 U	5.6 U	5.2 U
2-Chloroethylvinylether	13 U	11 U	11 U	10 U
Bromoform	6.3 U	5.7 U	5.6 U	5.2 U
4-Methyl-2-pentanone	13 U	11 U	11 U	10 U
2-Hexanone	13 U	11 U	11 U	10 U
Tetrachloroethene	6.3 U	5.7 U	5.6 U	5.2 U
1,1,2,2-Tetrachloroethane	6.3 U	5.7 U	5.6 U	5.2 U
Toluene	6.3 U	3.0 J	2.0 J	5.2 U
Chlorobenzene	6.3 U	5.7 U	5.6 U	5.2 U
Ethylbenzene	6.3 U	5.7 U	5.6 U	5.2 U
Styrene	6.3 U	5.7 U	5.6 U	5.2 U
Total Xylenes	6.3 U	5.7 U	5.6 U	5.2 U

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery.

WESTON ANALYTICS
GC/MS DATA SUMMARY

Volatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: 8805-051 Client: BLM - ANTELOPE VALLEY

Sample Information

RFW Batch ID:	8805-051-008	8805-051-009
Customer ID:	AV-D-1	AV-B-1
Matrix:	Soil	Soil
Units:	UG/KG	UG/KG
Dilution Factor:	1	1

Surrogate Recovery

Toluene-d8:	105 %	107 %
Bromofluorobenzene:	93 %	95 %
1,2-Dichloroethane-d4:	98 %	116 %

Analytes

Chloromethane	14 U	11 U
Bromomethane	14 U	11 U
Vinyl Chloride	14 U	11 U
Chloroethane	14 U	11 U
Methylene Chloride	8.0 B	6.0 B
Acetone	21	15
Carbon Disulfide	7.0 U	5.4 U
1,1-Dichloroethene	7.0 U	5.4 U
1,1-Dichloroethane	7.0 U	5.4 U
Trans-1,2-Dichloroethene	7.0 U	5.4 U
Chloroform	3.0 JB	2.0 JB
1,2-Dichloroethane	7.0 U	5.4 U
2-Butanone	14 U	11 U
1,1,1-Trichloroethane	7.0 U	5.4 U
Carbon Tetrachloride	7.0 U	5.4 U
Vinyl Acetate	14 U	11 U
Bromodichloromethane	7.0 U	5.4 U
1,2-Dichloropropane	7.0 U	5.4 U
Trans-1,3-Dichloropropene	7.0 U	5.4 U
Trichloroethene	7.0 U	5.4 U
Dibromochloromethane	7.0 U	5.4 U
1,1,2-Trichloroethane	7.0 U	5.4 U
Benzene	7.0 U	5.4 U
cis-1,3-Dichloropropene	7.0 U	5.4 U
2-Chloroethylvinylether	14 U	11 U
Bromoform	7.0 U	5.4 U
4-Methyl-2-pentanone	14 U	11 U
2-Hexanone	14 U	11 U
Tetrachloroethene	7.0 U	5.4 U
1,1,2,2-Tetrachloroethane	7.0 U	5.4 U
Toluene	7.0 U	5.4 U
Chlorobenzene	7.0 U	5.4 U
Ethylbenzene	7.0 U	5.4 U
Styrene	7.0 U	5.4 U
Total Xylenes	7.0 U	5.4 U

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery.

WESTON

Client: BLM Antelope Valley

Sample ID: Blank QA88117

Sampled: NA
Received: NA

Matrix: SOIL

RFW Job #: 8805s051

ORGANOCHLORINE PESTICIDES/PCB'S EPA 8080

Extracted: 05/26/88 Ext Fact: 3
Analyzed: 05/31/88 Dil Fact: 1
Confirmed: NC Blank ID:NA

RFW Lab #: NA

Compound	Results (ppm) mg/Kg	Det Limit Sample mg/Kg
BHC-alpha	U	0.003
BHC-beta	U	0.003
BHC-delta	U	0.003
BHC-gamma (Lindane)	U	0.003
Heptachlor	U	0.003
Aldrin	U	0.003
Heptachlor Epoxide	U	0.003
Endosulfan I	U	0.003
Dieldrin	U	0.005
4,4'-DDE	U	0.005
Endrin	U	0.005
4,4'-DDD	U	0.005
Endosulfan II	U	0.005
4,4'-DDT	U	0.005
Endrin Aldehyde	U	0.005
Endosulfan Sulfate	U	0.005
Endrin Ketone	U	0.005
Methoxychlor	U	0.025
Chlordane-gamma	U	0.025
Chlordane-alpha	U	0.025
Toxaphene	U	0.050
Aroclor 1016	U	0.025
Aroclor 1221	U	0.025
Aroclor 1232	U	0.025
Aroclor 1242	U	0.025
Aroclor 1248	U	0.025
Aroclor 1254	U	0.050
Aroclor 1260	U	0.050

ORGANOPHOSPHOROUS PESTICIDES EPA 8140

Extracted: 05/26/88 Ext Fact: 3
Analyzed: 06/03/88 Dil Fact: 1
Confirmed: NC Blank ID:NA

RFW Lab #: NA

Compound	Results (ppm) mg/Kg	Det Limit Sample mg/Kg
Phorate	U	0.010
Dimethoate	U	0.010
Dioxathion (Delnav)	U	0.050
Diazinon	U	0.015
Disulfoton (DiSyston)	U	0.015
Demeton	U	0.015
Methyl Parathion	U	0.015
Malathion	U	0.020
Ethyl Parathion	U	0.020
DEF	U	0.025
Ethion	U	0.025
Thionazin	U	0.025
Famphur	U	0.100
Azinphos-methyl (Guthion)	U	0.100

U = Compound analyzed for but not detected
All values are corrected for % moisture

Approved:

Declan Cowley
Organic Section Manager

WESTON

Client: BLM Antelope Valley

Sample ID: AV-P-1

Sampled: 05/19/88
Received: 05/21/88

Matrix: SOIL
% Moist: 12

RFW Job #: 8805s051

ORGANOCHLORINE PESTICIDES/PCB'S	EPA 8080		
Extracted:	05/26/88	Ext Fact:	3
Analyzed:	05/31/88	Dil Fact:	1
Confirmed:	YES	Blank ID:	QA88117

RFW Lab #: 001	Results (ppm)	Det Limit Sample	
Compound	mg/Kg	mg/Kg	
BHC-alpha	U	0.003	
BHC-beta	U	0.003	
BHC-delta	U	0.003	
BHC-gamma (Lindane)	U	0.003	
Heptachlor	U	0.003	
Aldrin	U	0.003	
Heptachlor Epoxide	U	0.003	
Endosulfan I	U	0.003	
Dieldrin	U	0.006	
4,4'-DDE	U	0.006	
Endrin	U	0.006	
4,4'-DDD	U	0.006	
Endosulfan II	U	0.006	
4,4'-DDT	U	0.006	
Endrin Aldehyde	U	0.006	
Endosulfan Sulfate	U	0.006	
Endrin Ketone	U	0.006	
Methoxychlor	U	0.028	
Chlordane-gamma	U	0.028	
Chlordane-alpha	U	0.028	
Toxaphene	U	0.057	
Aroclor 1016	U	0.028	
Aroclor 1221	U	0.028	
Aroclor 1232	U	0.028	
Aroclor 1242	U	0.028	
Aroclor 1248	U	0.028	
Aroclor 1254	U	0.057	
Aroclor 1260	U	0.057	

ORGANOPHOSPHOROUS PESTICIDES	EPA 8140		
Extracted:	05/26/88	Ext Fact:	3
Analyzed:	06/03/88	Dil Fact:	1
Confirmed:	NC	Blank ID:	QA88117

RFW Lab #: 001	Results (ppm)	Det Limit Sample	
Compound	mg/Kg	mg/Kg	
Phorate	U	0.011	
Dimethoate	U	0.011	
Dioxathion (Delnav)	U	0.057	
Diazinon	U	0.017	
Disulfoton (DiSyston)	U	0.017	
Demeton	U	0.017	
Methyl Parathion	U	0.017	
Malathion	U	0.023	
Ethyl Parathion	U	0.023	
DEF	U	0.028	
Ethion	U	0.028	
Thionazin	U	0.028	
Famphur	U	0.114	
Azinphos-methyl (Guthion)	U	0.114	

U = Compound analyzed for but not detected
All values are corrected for % moisture

Approved:

Declan Cowley
Organic Section Manager

WESTON

Client: BLM Antelope Valley

Sampled: 05/19/88
Received: 05/21/88

Matrix: SOIL
% Moist: 15

Sample ID: AV-P-2
RFW Job #: 8805s051

ORGANOCHLORINE PESTICIDES/PCB'S — EPA 8080

Extracted: 05/26/88
Analyzed: 05/31/88
Confirmed: NC

Ext Fact: 3
Dil Fact: 1
Blank ID: QA88117

RFW Lab #: 002

Compound	Results (ppm) mg/Kg		Det Limit Sample mg/Kg
BHC-alpha	U		0.003
BHC-beta	U		0.003
BHC-delta	U		0.003
BHC-gamma (Lindane)	U		0.003
Heptachlor	U		0.003
Aldrin	U		0.003
Heptachlor Epoxide	U		0.003
Endosulfan I	U		0.003
Dieldrin	U		0.006
4,4'-DDE	U		0.006
Endrin	U		0.006
4,4'-DDD	U		0.006
Endosulfan II	U		0.006
4,4'-DDT	U		0.006
Endrin Aldehyde	U		0.006
Endosulfan Sulfate	U		0.006
Endrin Ketone	U		0.006
Methoxychlor	U		0.029
Chlordane-gamma	U		0.029
Chlordane-alpha	U		0.029
Toxaphene	U		0.059
Aroclor 1016	U		0.029
Aroclor 1221	U		0.029
Aroclor 1232	U		0.029
Aroclor 1242	U		0.029
Aroclor 1248	U		0.029
Aroclor 1254	U		0.059
Aroclor 1260	U		0.059

ORGANOPHOSPHOROUS PESTICIDES — EPA 8140

Extracted: 05/26/88
Analyzed: 06/03/88
Confirmed: NC

Ext Fact: 3
Dil Fact: 1
Blank ID: QA88117

RFW Lab #: 002

Compound	Results (ppm) mg/Kg		Det Limit Sample mg/Kg
Phorate	U		0.012
Dimethoate	U		0.012
Dioxathion (Delnav)	U		0.059
Diazinon	U		0.018
Disulfoton (DiSyston)	U		0.018
Demeton	U		0.018
Methyl Parathion	U		0.018
Malathion	U		0.024
Ethyl Parathion	U		0.024
DEF	U		0.029
Ethion	U		0.029
Thionazin	U		0.029
Famphur	U		0.118
Azinphos-methyl (Guthion)	U		0.118

U = Compound analyzed for but not detected
All values are corrected for % moisture

Approved:

Declan Cowley
Organic Section Manager

WESTON

Client: BLM Antelope Valley

Sampled: 05/19/88
Received: 05/21/88

Sample ID: AV-P-3
Matrix: SOIL
% Moist: 11
RFW Job #: 8805s051

ORGANOCHLORINE PESTICIDES/PCB'S — EPA 8080

Extracted: 05/26/88 | Ext Fact: 3
Analyzed: 05/31/88 | Dil Fact: 1
Confirmed: NC | Blank ID: QA88117

RFW Lab #: 003

Compound	Results (ppm) mg/Kg		Det Limit Sample mg/Kg
BHC-alpha	U		0.003
BHC-beta	U		0.003
BHC-delta	U		0.003
BHC-gamma (Lindane)	U		0.003
Heptachlor	U		0.003
Aldrin	U		0.003
Heptachlor Epoxide	U		0.003
Endosulfan I	U		0.003
Dieldrin	U		0.006
4,4'-DDE	U		0.006
Endrin	U		0.006
4,4'-DDD	U		0.006
Endosulfan II	U		0.006
4,4'-DDT	U		0.006
Endrin Aldehyde	U		0.006
Endosulfan Sulfate	U		0.006
Endrin Ketone	U		0.006
Methoxychlor	U		0.028
Chlordane-gamma	U		0.028
Chlordane-alpha	U		0.028
Toxaphene	U		0.056
Aroclor 1016	U		0.028
Aroclor 1221	U		0.028
Aroclor 1232	U		0.028
Aroclor 1242	U		0.028
Aroclor 1248	U		0.028
Aroclor 1254	U		0.056
Aroclor 1260	U		0.056

ORGANOPHOSPHOROUS PESTICIDES — EPA 8140

Extracted: 05/26/88 | Ext Fact: 3
Analyzed: 06/03/88 | Dil Fact: 1
Confirmed: NC | Blank ID: QA88117

RFW Lab #: 003

Compound	Results (ppm) mg/Kg		Det Limit Sample mg/Kg
Phorate	U		0.011
Dimethoate	U		0.011
Dioxathion (Delnav)	U		0.056
Diazinon	U		0.017
Disulfoton (DiSyston)	U		0.017
Demeton	U		0.017
Methyl Parathion	U		0.017
Malathion	U		0.022
Ethyl Parathion	U		0.022
DEF	U		0.028
Ethion	U		0.028
Thionazin	U		0.028
Famphur	U		0.112
Azinphos-methyl (Guthion)	U		0.112

U = Compound analyzed for but not detected
All values are corrected for % moisture

Approved:

Declan Cowley
Organic Section Manager

WESTON

Client: BLM Antelope Valley

Sample ID: AV-P-3B

Sampled: 05/19/88
Received: 05/21/88

Matrix: SOIL
% Moist: 14

RFW Job #: 8805s051

ORGANOCHLORINE PESTICIDES/PCB'S EPA 8080

Extracted: 05/26/88 Ext Fact: 3
Analyzed: 05/31/88 Dil Fact: 1
Confirmed: NC Blank ID: QA88117

RFW Lab #: 004

Compound	Results (ppm) mg/Kg		Det Limit Sample mg/Kg
BHC-alpha		U	0.003
BHC-beta		U	0.003
BHC-delta		U	0.003
BHC-gamma (Lindane)		U	0.003
Heptachlor		U	0.003
Aldrin		U	0.003
Heptachlor Epoxide		U	0.003
Endosulfan I		U	0.003
Dieldrin		U	0.006
4,4'-DDE		U	0.006
Endrin		U	0.006
4,4'-DDD		U	0.006
Endosulfan II		U	0.006
4,4'-DDT		U	0.006
Endrin Aldehyde		U	0.006
Endosulfan Sulfate		U	0.006
Endrin Ketone		U	0.006
Methoxychlor		U	0.029
Chlordane-gamma		U	0.029
Chlordane-alpha		U	0.029
Toxaphene		U	0.058
Aroclor 1016		U	0.029
Aroclor 1221		U	0.029
Aroclor 1232		U	0.029
Aroclor 1242		U	0.029
Aroclor 1248		U	0.029
Aroclor 1254		U	0.058
Aroclor 1260		U	0.058

ORGANOPHOSPHOROUS PESTICIDES EPA 8140

Extracted: 05/26/88 Ext Fact: 3
Analyzed: 06/03/88 Dil Fact: 1
Confirmed: NC Blank ID: QA88117

RFW Lab #: 004

Compound	Results (ppm) mg/Kg		Det Limit Sample mg/Kg
Phorate		U	0.012
Dimethoate		U	0.012
Dioxathion (Delnav)		U	0.058
Diazinon		U	0.017
Disulfoton (DiSyston)		U	0.017
Demeton		U	0.017
Methyl Parathion		U	0.017
Malathion		U	0.023
Ethyl Parathion		U	0.023
DEF		U	0.029
Ethion		U	0.029
Thionazin		U	0.029
Famphur		U	0.116
Azinphos-methyl (Guthion)		U	0.116

U = Compound analyzed for but not detected
All values are corrected for % moisture

Approved:

Declan Cowley
Organic Section Manager

WESTON

Client: BLM Antelope Valley

Sample ID: AV-P-4

Sampled: 05/19/88
Received: 05/21/88

Matrix: SOIL
% Moist: 12

RFW Job #: 8805s051

ORGANOCHLORINE PESTICIDES/PCB'S EPA 8080

Extracted: 05/26/88
Analyzed: 05/31/88
Confirmed: NC

Ext Fact: 3
Dil Fact: 1
Blank ID: QA88117

RFW Lab #: 005

Compound	Results (ppm) mg/Kg	Det Limit Sample mg/Kg
BHC-alpha	U	0.003
BHC-beta	U	0.003
BHC-delta	U	0.003
BHC-gamma (Lindane)	U	0.003
Heptachlor	U	0.003
Aldrin	U	0.003
Heptachlor Epoxide	U	0.003
Endosulfan I	U	0.003
Dieldrin	U	0.006
4,4'-DDE	U	0.006
Endrin	U	0.006
4,4'-DDD	U	0.006
Endosulfan II	U	0.006
4,4'-DDT	U	0.006
Endrin Aldehyde	U	0.006
Endosulfan Sulfate	U	0.006
Endrin Ketone	U	0.006
Methoxychlor	U	0.028
Chlordane-gamma	U	0.028
Chlordane-alpha	U	0.028
Toxaphene	U	0.057
Aroclor 1016	U	0.028
Aroclor 1221	U	0.028
Aroclor 1232	U	0.028
Aroclor 1242	U	0.028
Aroclor 1248	U	0.028
Aroclor 1254	U	0.057
Aroclor 1260	U	0.057

ORGANOPHOSPHOROUS PESTICIDES EPA 8140

Extracted: 05/26/88
Analyzed: 06/03/88
Confirmed: NC

Ext Fact: 3
Dil Fact: 1
Blank ID: QA88117

RFW Lab #: 005

Compound	Results (ppm) mg/Kg	Det Limit Sample mg/Kg
Phorate	U	0.011
Dimethoate	U	0.011
Dioxathion (Delnav)	U	0.057
Diazinon	U	0.017
Disulfoton (DiSyston)	U	0.017
Demeton	U	0.017
Methyl Parathion	U	0.017
Malathion	U	0.023
Ethyl Parathion	U	0.023
DEF	U	0.028
Ethion	U	0.028
Thionazin	U	0.028
Famphur	U	0.114
Azinphos-methyl (Guthion)	U	0.114

U = Compound analyzed for but not detected
All values are corrected for % moisture

Approved:

Declan Cowley
Organic Section Manager

WESTON

Client: BLM Antelope Valley

Sample ID: AV-RIN-1

Sampled: 05/19/88
Received: 05/21/88

Matrix: SOIL
% Moist: 11

RFW Job #: 8805s051

ORGANOCHLORINE PESTICIDES/PCB'S EPA 8080

Extracted: 05/26/88 Ext Fact: 3
Analyzed: 05/31/88 Dil Fact: 1
Confirmed: NC Blank ID: QA88117

RFW Lab #: 006 Compound	Results (ppm) mg/Kg	Det Limit Sample mg/Kg
BHC-alpha	U	0.003
BHC-beta	U	0.003
BHC-delta	U	0.003
BHC-gamma (Lindane)	U	0.003
Heptachlor	U	0.003
Aldrin	U	0.003
Heptachlor Epoxide	U	0.003
Endosulfan I	U	0.003
Dieldrin	U	0.006
4,4'-DDE	U	0.006
Endrin	U	0.006
4,4'-DDD	U	0.006
Endosulfan II	U	0.006
4,4'-DDT	U	0.006
Endrin Aldehyde	U	0.006
Endosulfan Sulfate	U	0.006
Endrin Ketone	U	0.006
Methoxychlor	U	0.028
Chlordane-gamma	U	0.028
Chlordane-alpha	U	0.028
Toxaphene	U	0.056
Aroclor 1016	U	0.028
Aroclor 1221	U	0.028
Aroclor 1232	U	0.028
Aroclor 1242	U	0.028
Aroclor 1248	U	0.028
Aroclor 1254	U	0.056
Aroclor 1260	U	0.056

ORGANOPHOSPHOROUS PESTICIDES EPA 8140

Extracted: 05/26/88 Ext Fact: 3
Analyzed: 06/03/88 Dil Fact: 1
Confirmed: NC Blank ID: QA88117

RFW Lab #: 006 Compound	Results (ppm) mg/Kg	Det Limit Sample mg/Kg
Phorate	U	0.011
Dimethoate	U	0.011
Dioxathion (Delnav)	U	0.056
Diazinon	U	0.017
Disulfoton (DiSyston)	U	0.017
Demeton	U	0.017
Methyl Parathion	U	0.017
Malathion	U	0.022
Ethyl Parathion	U	0.022
DEF	U	0.028
Ethion	U	0.028
Thionazin	U	0.028
Famphur	U	0.112
Azinphos-methyl (Guthion)	U	0.112

U = Compound analyzed for but not detected
All values are corrected for % moisture

Approved:

Declan Cowley
Organic Section Manager

WESTON

Client: BLM Antelope Valley

Sample ID: AV-RECP-1

Sampled: 05/19/88
Received: 05/21/88

Matrix: SOIL
% Moist: 4

RFW Job #: 3805s051

ORGANOCHLORINE PESTICIDES/PCB'S — EPA 8080

Extracted: 05/26/88 | Ext Fact: 3
Analyzed: 05/31/88 | Dil Fact: 10
Confirmed: NC | Blank ID: QA88117

RFW Lab #: 007

Compound	Results (ppm) mg/Kg		Det Limit Sample mg/Kg
BHC-alpha	U		0.026
BHC-beta	U		0.026
BHC-delta	U		0.026
BHC-gamma (Lindane)	U		0.026
Heptachlor	U		0.026
Aldrin	U		0.026
Heptachlor Epoxide	U		0.026
Endosulfan I	U		0.026
Dieldrin	U		0.052
4,4'-DDE	U		0.052
Endrin	U		0.052
4,4'-DDD	U		0.052
Endosulfan II	U		0.052
4,4'-DDT	U		0.052
Endrin Aldehyde	U		0.052
Endosulfan Sulfate	U		0.052
Endrin Ketone	U		0.052
Methoxychlor	U		0.260
Chlordane-gamma	U		0.260
Chlordane-alpha	U		0.260
Toxaphene	U		0.521
Aroclor 1016	U		0.260
Aroclor 1221	U		0.260
Aroclor 1232	U		0.260
Aroclor 1242	U		0.260
Aroclor 1248	U		0.260
Aroclor 1254	U		0.521
Aroclor 1260	U		0.521

ORGANOPHOSPHOROUS PESTICIDES — EPA 8140

Extracted: 05/26/88 | Ext Fact: 3
Analyzed: 06/03/88 | Dil Fact: 1
Confirmed: NC | Blank ID: QA88117

RFW Lab #: 007

Compound	Results (ppm) mg/Kg		Det Limit Sample mg/Kg
Phorate	U		0.010
Dimethoate	U		0.010
Dioxathion (Delnav)	U		0.052
Diazinon	U		0.016
Disulfoton (DiSyston)	U		0.016
Demeton	U		0.016
Methyl Parathion	U		0.016
Malathion	U		0.021
Ethyl Parathion	U		0.021
DEF	U		0.026
Ethion	U		0.026
Thionazin	U		0.026
Famphur	U		0.104
Azinphos-methyl (Guthion)	U		0.104

U = Compound analyzed for but not detected
All values are corrected for % moisture

Approved:

Declan Cowley
Organic Section Manager

WESTON

Client: BLM Antelope Valley

Sample ID: AV-D-1

Sampled: 05/19/88
Received: 05/21/88

Matrix: SOIL
% Moist: 28

RFW Job #: 8805s051

ORGANOCHLORINE PESTICIDES/PCB'S EPA 8080

Extracted: 05/26/88 Ext Fact: 3
Analyzed: 05/31/88 Dil Fact: 1
Confirmed: NC Blank ID: QA88117

RFW Lab #: 008

Compound	Results (ppm) mg/Kg		Det Limit Sample mg/Kg
BHC-alpha	U		0.003
BHC-beta	U		0.003
BHC-delta	U		0.003
BHC-gamma (Lindane)	U		0.003
Heptachlor	U		0.003
Aldrin	U		0.003
Heptachlor Epoxide	U		0.003
Endosulfan I	U		0.003
Dieldrin	U		0.007
4,4'-DDE	U		0.007
Endrin	U		0.007
4,4'-DDD	U		0.007
Endosulfan II	U		0.007
4,4'-DDT	U		0.007
Endrin Aldehyde	U		0.007
Endosulfan Sulfate	U		0.007
Endrin Ketone	U		0.007
Methoxychlor	U		0.035
Chlordane-gamma	U		0.035
Chlordane-alpha	U		0.035
Toxaphene	U		0.069
Aroclor 1016	U		0.035
Aroclor 1221	U		0.035
Aroclor 1232	U		0.035
Aroclor 1242	U		0.035
Aroclor 1248	U		0.035
Aroclor 1254	U		0.069
Aroclor 1260	U		0.069

ORGANOPHOSPHOROUS PESTICIDES EPA 8140

Extracted: 05/26/88 Ext Fact: 3
Analyzed: 06/03/88 Dil Fact: 1
Confirmed: NC Blank ID: QA88117

RFW Lab #: 008

Compound	Results (ppm) mg/Kg		Det Limit Sample mg/Kg
Phorate	U		0.014
Dimethoate	U		0.014
Dioxathion (Delnav)	U		0.069
Diazinon	U		0.021
Disulfoton (DiSyston)	U		0.021
Demeton	U		0.021
Methyl Parathion	U		0.021
Malathion	U		0.028
Ethyl Parathion	U		0.028
DEF	U		0.035
Ethion	U		0.035
Thionazin	U		0.035
Famphur	U		0.139
Azinphos-methyl (Guthion)	U		0.139

U = Compound analyzed for but not detected
All values are corrected for % moisture

Approved:

Declan Cowley
Organic Section Manager

WESTON

Client: BLM Antelope Valley

Sample ID: AV-B-1

Sampled: 05/19/88
Received: 05/21/88

Matrix: SOIL
% Moist: 6.8

RFW Job #: 8805s051

ORGANOCHLORINE PESTICIDES/PCB'S EPA 8080

Extracted: 05/26/88
Analyzed: 05/31/88
Confirmed: NC

Ext Fact: 3
Dil Fact: 1
Blank ID: QA88117

RFW Lab #: 009

Compound	Results (ppm) mg/Kg	Det Limit Sample mg/Kg
BHC-alpha	U	0.003
BHC-beta	U	0.003
BHC-delta	U	0.003
BHC-gamma (Lindane)	U	0.003
Heptachlor	U	0.003
Aldrin	U	0.003
Heptachlor Epoxide	U	0.003
Endosulfan I	U	0.003
Dieldrin	U	0.005
4,4'-DDE	U	0.005
Endrin	U	0.005
4,4'-DDD	U	0.005
Endosulfan II	U	0.005
4,4'-DDT	U	0.005
Endrin Aldehyde	U	0.005
Endosulfan Sulfate	U	0.005
Endrin Ketone	U	0.005
Methoxychlor	U	0.027
Chlordane-gamma	U	0.027
Chlordane-alpha	U	0.027
Toxaphene	U	0.054
Aroclor 1016	U	0.027
Aroclor 1221	U	0.027
Aroclor 1232	U	0.027
Aroclor 1242	U	0.027
Aroclor 1248	U	0.027
Aroclor 1254	U	0.054
Aroclor 1260	U	0.054

ORGANOPHOSPHOROUS PESTICIDES EPA 8140

Extracted: 05/26/88
Analyzed: 06/03/88
Confirmed: NC

Ext Fact: 3
Dil Fact: 1
Blank ID: QA88117

RFW Lab #: 009

Compound	Results (ppm) mg/Kg	Det Limit Sample mg/Kg
Phorate	U	0.011
Dimethoate	U	0.011
Dioxathion (Delnav)	U	0.054
Diazinon	U	0.016
Disulfoton (DiSyston)	U	0.016
Demeton	U	0.016
Methyl Parathion	U	0.016
Malathion	U	0.021
Ethyl Parathion	U	0.021
DEF	U	0.027
Ethion	U	0.027
Thionazin	U	0.027
Famphur	U	0.107
Azinphos-methyl (Guthion)	U	0.107

U = Compound analyzed for but not detected
All values are corrected for % moisture

Approved:

Declan Cowley
Organic Section Manager

APPENDIX B

CHAIN-OF-CUSTODY

WESTON DESIGNERS CONSULTANTS

CHAIN OF CUSTODY RECORD

SAMPLERS: (Signature) [signature]

Phone: 818 340-2610

SHIP TO:

Roy F. Weston
[illegible] Avenue
[illegible] CA 95210

ATTENTION: [illegible] Haulo

Phone No.: 209 / 957-3405

SHIPPING INFORMATION

Location: [illegible] NJ

Shipper: RFW

Address:

Date Shipped: 5-20-88

Shipment Service: [illegible]

Airbill No. 1371007934

Cooler No. 1

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
[signature]		
	Received for laboratory by: (Signature) William C. [illegible]	5/21/88 [illegible]

Analysis laboratory should complete "sample cond. upon receipt" section below, sign and return copy to Shipper

Sample Number	No. Of Cont.	Site Identification	Date Sampled	Analysis Requested	Sample Cond. Upon Receipt
AV-P-1	1-8oz	Ant. Val	5-19-88	EPA 8240 8140 8080 w/PCBs	Good Cond. [illegible]
AV-P-2	1-8oz	Ant. Val	5-19-88	EPA 8240 8140 8080 w/PCBs	
AV-P-3	1-8oz	Ant. Val	5-19-88	EPA 8240 8140 8080 w/PCBs	
AV-P-3B	1-8oz	Ant. Val	5-19-88	EPA 8240 8140 8080 w/PCBs	
AV-P-4	1-8oz	Ant. Val	5-19-88	EPA 8240 8140 8080 w/PCBs	
AV-CIN-1	1-8oz	Ant. Val	5-19-88	EPA 8240 8140 8080 w/PCBs	
AV-RECP-1	1-8oz	Ant. Val	5-19-88	EPA 8240 8140 8080 w/PCBs	
AV-D-2	1-8oz	Ant. Val	5-19-88	EPA 8240 8140 8080 w/PCBs	
AV-P-7	1-8oz	Ant. Val	5-19-88	EPA 8240 8140 8080 w/PCBs	
			END		

Remarks: [illegible] 3-07

White - Sampler   Canary - Return Copy to Shipper   Pink - Lab Copy

APPENDIX C

EPA FORM FOR SITE INVESTIGATION

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

EPA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NV	2878-03-07

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
Antelope Valley Pesticide Container Disposal Site	Approx. 5.5 miles W. Route 305

03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
	NV		Lander County		

09 COORDINATES LATITUDE	LONGITUDE
40 02 30 N	117 14 30 W

10 TYPE OF OWNERSHIP (Check one)
☐ A. PRIVATE ☒ B. FEDERAL ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL ☐ F. OTHER ☐ G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION	02 SITE STATUS	03 YEARS OF OPERATION
5,19,88 (MONTH DAY YEAR)	☒ ACTIVE ☐ INACTIVE	10/71 (BEGINNING YEAR) Present (ENDING YEAR) ☐ UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)
☐ A. EPA ☐ B. EPA CONTRACTOR _____ (Name of firm) ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR _____ (Name of firm)
☐ E. STATE ☐ F. STATE CONTRACTOR _____ (Name of firm) ☒ G. OTHER BLM contractor (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO
Robert Mueller	Field Manager	Weston	( ) 818340-2610
09 OTHER INSPECTORS	10 TITLE	11 ORGANIZATION	12 TELEPHONE NO
Jeff Bannon	Geologist	Weston	( ) 818340-2610
			( )
			( )
			( )
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
Byard Kershaw	Geologist	BLM Battlemountain District, NV	( ) 702635-5181
			( )
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
☒ PERMISSION ☐ WARRANT	0900	Hot/partially cloudy

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO
Larry Steward	Bureau of Land Management	( )

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
Robert Mueller		Weston	818/340-2610	7 15 88 (MONTH DAY YEAR)

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NV	2878-03-07

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- XX A SOLID
- ☐ B POWDER, FINES
- ☐ C SLUDGE
- ☐ D OTHER _____ (Specify)
- ☐ E SLURRY
- XX F LIQUID
- ☐ G GAS

02 WASTE QUANTITY AT SITE (Measures of waste quantities must be independent)

TONS _____

CUBIC YARDS _____

NO OF DRUMS ± 100 empty and several glass jars with liquids

03 WASTE CHARACTERISTICS (Check all that apply)

- XX A TOXIC
- ☐ B CORROSIVE
- ☐ C RADIOACTIVE
- ☐ D PERSISTENT
- ☐ E SOLUBLE
- ☐ F. INFECTIOUS
- ☐ G FLAMMABLE
- ☐ H IGNITABLE
- ☐ I HIGHLY VOLATILE
- ☐ J EXPLOSIVE
- ☐ K REACTIVE
- ☐ L INCOMPATIBLE
- ☐ M NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			
SOL	SOLVENTS			
PSD	PESTICIDES	100 emp.	drums	No surface soil contaminant
OCC	OTHER ORGANIC CHEMICALS			was detected.
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS			

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
	N/A				

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g. state files, sampling analysis reports)

See BLM Draft Antelope Valley Site Investigation Report, 1988.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE: NV | 02 SITE NUMBER: 2878-03-07

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☐ A GROUNDWATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: _____
02 ☐ OBSERVED (DATE _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Sampling results do not indicate soil contamination on site, but the lack of a lined trench, the possibility of sumps, and the presence of liquid in glass jars poses a potential for groundwater contamination.

01 ☐ B SURFACE WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: _____
02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Sampling results, distance and pathway to nearest surface water (Cain Creek) do not indicate a potential for surface water contamination.

01 ☐ C CONTAMINATION OF AIR
03 POPULATION POTENTIALLY AFFECTED: _____
02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

No air releases noted.

01 ☐ D FIRE/EXPLOSIVE CONDITIONS
03 POPULATION POTENTIALLY AFFECTED: _____
02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

N/A

01 ☒ E DIRECT CONTACT
03 POPULATION POTENTIALLY AFFECTED: 1-2 person per month
02 ☐ OBSERVED (DATE _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

County personnel disposing of drums.

01 ☒ F CONTAMINATION OF SOIL
03 AREA POTENTIALLY AFFECTED: Less than ½ acre (Acres)
02 ☒ OBSERVED (DATE 10/15/86) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Alpha endosulfan (70 ug/kg), benzoic acid (1570 ug/kg) and chloroform (3 ug/kg), were detected in soil samples during the PA. No compounds of significance were detected in the sampling conducted for the SI.

01 ☐ G DRINKING WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: _____
02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Soil sample results do not indicate contamination of drinking water.

01 ☐ H WORKER EXPOSURE/INJURY
03 WORKERS POTENTIALLY AFFECTED: _____
02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

N/A

01 ☐ I POPULATION EXPOSURE/INJURY
03 POPULATION POTENTIALLY AFFECTED: _____
02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

N/A

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NV	2878-03-07

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☐ J DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

N/A

01 ☐ K DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION (Include names of species)

N/A

01 ☐ L CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

N/A

01 ☐ M UNSTABLE CONTAINMENT OF WASTES (Spills, Runoff, Standing liquids, Leaking drums) — 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

N/A

01 ☐ N DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

N/A

01 ☐ O CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

N/A

01 ☐ P ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

N/A

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

N/A

III. TOTAL POPULATION POTENTIALLY AFFECTED: 1 - 2 persons/month -- Direct contact

IV. COMMENTS

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

BLM Site Investigation Report, 7/88.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NV	2878-03-07

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
☐ A. NPDES				
☐ B. UIC				
☐ C. AIR				
☐ D. RCRA				
☐ E. RCRA INTERIM STATUS				
☐ F. SPCC PLAN				
☐ G. STATE (Specify)				
☐ H. LOCAL (Specify)				
☒ I. OTHER (Specify)	N6-72-11	1971	Present	Special land use permi
☐ J. NONE				

III. SITE DESCRIPTION

01 STORAGE DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE
☐ A. SURFACE IMPOUNDMENT		
☐ B. PILES		
☐ C. DRUMS, ABOVE GROUND		
☐ D. TANK, ABOVE GROUND		
☐ E. TANK, BELOW GROUND		
☒ F. LANDFILL	**	Containers
☐ G. LANDFARM		
☐ H. OPEN DUMP		
☐ I. OTHER _____ (Specify)		

04 TREATMENT (Check all that apply)

- ☐ A. INCINERATION
- ☐ B. UNDERGROUND INJECTION
- ☐ C. CHEMICAL/PHYSICAL
- ☐ D. BIOLOGICAL
- ☐ E. WASTE OIL PROCESSING
- ☐ F. SOLVENT RECOVERY
- ☐ G. OTHER RECYCLING/RECOVERY
- ☐ H. OTHER _____ (Specify)

05 OTHER

- ☒ A. BUILDINGS ON SITE

06 AREA OF SITE

Two _____ (Acres)

07 COMMENTS

** More than 100

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)

☐ A. ADEQUATE, SECURE ☐ B. MODERATE ☒ C. INADEQUATE, POOR ☐ D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC.

Empty containers in unlined landfill pit. Inadequately capped. Liquids noted in some containers.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE ☐ YES ☒ NO

02 COMMENTS

Disposal is fenced with a locked gate. However, no security force is on site.

VI. SOURCES OF INFORMATION (Cite specific references, e.g. state files, sampling results)

BLM Site Investigation Report, 7/88.

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 6 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NV	2878-03-07

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as appropriate)

	SURFACE	WELL
COMMUNITY	A. ☐	B. ☐
NON-COMMUNITY	C. ☒	D. ☒

02 STATUS Unknown

ENDANGERED	AFFECTED	MONITORED
A. ☐	B. ☐	C. ☐
D. ☐	E. ☐	F. ☐

03 DISTANCE TO SITE

A. _____ (mi)
B. 1 (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)

☐ A. ONLY SOURCE FOR DRINKING ☐ B. DRINKING (Other sources available) COMMERCIAL, INDUSTRIAL, IRRIGATION (No other water sources available) ☒ C. COMMERCIAL, INDUSTRIAL, IRRIGATION (Limited other sources available) ☐ D. NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUND WATER 5-20

03 DISTANCE TO NEAREST DRINKING WATER WELL 0.6 (mi)

04 DEPTH TO GROUNDWATER	05 DIRECTION OF GROUNDWATER FLOW	06 DEPTH TO AQUIFER OF CONCERN	07 POTENTIAL YIELD OF AQUIFER	08 SOLE SOURCE AQUIFER
110-130 (ft)	NE	110-130 (ft)	36000 (gpd)	☐ YES ☐ NO

09 DESCRIPTION OF WELLS (Including usage, depth, and location relative to population and buildings)

Drinking water and irrigation wells downgradient E/NE. Closest well 0.6 mile from site. Bedrock encountered 10 feet below grade at site.

10 RECHARGE AREA		11 DISCHARGE AREA	
☐ YES ☐ NO	COMMENTS: N/A	☐ YES ☐ NO	COMMENTS: N/A

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)

☐ A. RESERVOIR, RECREATION DRINKING WATER SOURCE ☒ B. IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES ☐ C. COMMERCIAL, INDUSTRIAL ☐ D. NOT CURRENTLY USED

Minimal use for stock (Cain Creek)

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME	AFFECTED	DISTANCE TO SITE
Cain Creek - however, no compound detected at site	☐	0.25 (mi)
	☐	(mi)
	☐	(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE
A. 5-10 NO. OF PERSONS	B. 10-25 NO. OF PERSONS	C. 20-30 NO. OF PERSONS

02 DISTANCE TO NEAREST POPULATION 1 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE 5-10

04 DISTANCE TO NEAREST OFF-SITE BUILDING 1 (mi)

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site (e.g., rural, village, densely populated urban area))

Minimal ranches and farms surrounding site. Closest ranch 1 mile east of site. Population assumed to be 3.8 persons.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NV	2878-03-07

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☐ A. $10^{-6} - 10^{-8}$ cm/sec ☐ B. $10^{-4} - 10^{-6}$ cm/sec ☒ C. $10^{-4} - 10^{-3}$ cm/sec ☐ D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

☐ A. IMPERMEABLE (Less than 10^{-6} cm/sec) ☒ B. RELATIVELY IMPERMEABLE ($10^{-4} - 10^{-6}$ cm/sec) ☐ C. RELATIVELY PERMEABLE ($10^{-2} - 10^{-4}$ cm/sec) ☐ D. VERY PERMEABLE (Greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK	04 DEPTH OF CONTAMINATED SOIL ZONE	05 SOIL pH	
10 (ft)	N/A (ft)	N/A	

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE: SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
0 (in)	2.5 - 4 (in)	12 %	E	12 %

09 FLOOD POTENTIAL

SITE IS IN _____ YEAR FLOODPLAIN

10

☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE: A _____ (mi)

OTHER: B. N/A (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)

Unknown observed in area. _____ (mi)

ENDANGERED SPECIES: Falcon, Golden Eagle

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL	RESIDENTIAL AREAS; NATIONAL STATE PARKS, FORESTS, OR WILDLIFE RESERVES	AGRICULTURAL LANDS: PRIME AG LAND	AGRICULTURAL LANDS: AG LAND
A. N/A (mi)	B. N/A (mi)	C. _____ (mi)	D. 1 (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

Stock grazing lands adjacent to property. Agricultural land approximately 1 mile northeast of site.

VII. SOURCES OF INFORMATION (Cite specific references e.g. state files, sample analysis, reports)

Site Investigation Report, July 1988, prepared by Roy F. Weston for BLM.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 6 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NV	2878-03-07

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER			
SURFACE WATER			
WASTE			
AIR			
RUNOFF			
SPILL			
SOIL	9	Weston Analytics, Stockton, CA	July, 1988
VEGETATION			
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
Radiation	No readings above background.
HNU	No readings above background.

IV. PHOTOGRAPHS AND MAPS

01 TYPE ☒ GROUND ☐ AERIAL

02 IN CUSTODY OF Roy F. Weston/R. Mueller
(Name of organization or individual)

03 MAPS ☒ YES ☐ NO

04 LOCATION OF MAPS Roy F. Weston

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

N/A

VI. SOURCES OF INFORMATION (Cite specific references, e.g. state files, sample analysis, reports)

BLM Site Investigation Report, July 1988, Roy F. Weston

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NV	2878-03-07

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER
Department of Interior Bureau of Land Management	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

PARENT COMPANY (If applicable)

08 NAME	09 D+B NUMBER

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

12 CITY	13 STATE	14 ZIP CODE

08 NAME	09 D+B NUMBER

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

12 CITY	13 STATE	14 ZIP CODE

08 NAME	09 D+B NUMBER

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

12 CITY	13 STATE	14 ZIP CODE

08 NAME	09 D+B NUMBER

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

12 CITY	13 STATE	14 ZIP CODE

III. PREVIOUS OWNER(S) (List most recent first)

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

IV. REALTY OWNER(S) (If applicable; list most recent first)

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - OPERATOR INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER

II. CURRENT OPERATOR (Provide if different from owner)

01 NAME	02 D+B NUMBER
Lander County	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE
Austin	NV	89310

08 YEARS OF OPERATION	09 NAME OF OWNER

OPERATOR'S PARENT COMPANY (If applicable)

10 NAME	11 D+B NUMBER

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

III. PREVIOUS OPERATOR(S) (List most recent first; provide only if different from owner)

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

PREVIOUS OPERATORS' PARENT COMPANIES (If applicable)

10 NAME	11 D+B NUMBER

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

10 NAME	11 D+B NUMBER

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

10 NAME	11 D+B NUMBER

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

IV. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis reports.)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NV	2878-03-07

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER
Lander County, Nevada	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE
Austin	NV	89310

III. OFF-SITE GENERATOR(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

IV. TRANSPORTER(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NV	2878-03-07

II. PAST RESPONSE ACTIVITIES

01 ☐ A. WATER SUPPLY CLOSED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ B. TEMPORARY WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ C. PERMANENT WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ D. SPILLED MATERIAL REMOVED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ E. CONTAMINATED SOIL REMOVED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ F. WASTE REPACKAGED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ G. WASTE DISPOSED ELSEWHERE — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ H. ON SITE BURIAL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ I. IN SITU CHEMICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ J. IN SITU BIOLOGICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ K. IN SITU PHYSICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ L. ENCAPSULATION — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ M. EMERGENCY WASTE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ N. CUTOFF WALLS — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ O. EMERGENCY DIKING/SURFACE WATER DIVERSION — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ P. CUTOFF TRENCHES/SUMP — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ Q. SUBSURFACE CUTOFF WALL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NV	2878-03-07

II PAST RESPONSE ACTIVITIES (Continued)

01 ☐ R BARRIER WALLS CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ S CAPPING/COVERING — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ T BULK TANKAGE REPAIRED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ U GROUT CURTAIN CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ V BOTTOM SEALED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ W GAS CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ X FIRE CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ Y LEACHATE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ Z AREA EVACUATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ 1 ACCESS TO SITE RESTRICTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ 2 POPULATION RELOCATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ 3 OTHER REMEDIAL ACTIVITIES — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

III. SOURCES OF INFORMATION (Cite specific references, e.g. state files, sample analysis, reports.)

BLM Site Investigation Report, Weston, July 1988

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 11 - ENFORCEMENT INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NV	2878-03-07

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY ENFORCEMENT ACTION ☐ YES ☒ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY ENFORCEMENT ACTION

Preliminary site investigation report was conducted by AEPCO, January, 1987, for the BLM. No enforcement actions were conducted.

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis reports)

BLM Site Investigation Report by Roy F. Weston, July, 1988.

APPENDIX D

HRS DATA SHEET

Facility name: ANTELOPE VALLEY PESTICIDE CONTAINER DISPOSAL SITE

Location: ANTELOPE VALLEY, LANDER COUNTY, NEVADA

EPA Region: REGION 9

Person(s) in charge of the facility: LANDER COUNTY BOARD OF COMMISSIONERS
AUSTIN, NEVADA 89310

Name of Reviewer: JEFFREY L. BANNON **Date:** 8-2-88

General description of the facility:

(For example: landfill, surface impoundment, pile, container; types of hazardous substances; location of the facility; contamination route of major concern; types of information needed for rating; agency action, etc.)

UNLINED LANDFILL/TRENCH FOR DISPOSAL OF EMPTY PESTICIDE/ HERBICIDE CONTAINERS. SITE IS LOCATED 5.5 MILES WEST OF ROUTE 305, 42 MILES SOUTH OF BATTLE MOUNTAIN, NEVADA. NO CONTAMINANTS ARE IDENTIFIED IN SOIL SAMPLES COLLECTED DURING THE SITE INVESTIGATION.

Scores: $S_M = 7.38$ ($S_{gw} = 12.45$ $S_{sw} = 2.80$ $S_a = 0$)

$S_{FE} =$ NA

$S_{DC} = 0.28$

HRS COVER SHEET

	S	S^2
Groundwater Route Score (S_{gw})	12.45	155.0
Surface Water Route Score (S_{sw})	2.80	7.84
Air Route Score (S_a)	0	0
$S_{gw}^2 + S_{sw}^2 + S_a^2$		162.84
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$		12.76
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2} \,/\, 1.73 = S_M =$		7.38

WORKSHEET FOR COMPUTING S_M

Ground Water Route Work Sheet

Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
[1] Observed Release	(0) 45	1	0	45	3.1
If observed release is given a score of 45, proceed to line [4]. If observed release is given a score of 0, proceed to line [2].					
[2] Route Characteristics					3.2
Depth to Aquifer of Concern	0 (1) 2 3	2	2	6	
Net Precipitation	(0) 1 2 3	1	0	3	
Permeability of the Unsaturated Zone	0 1 (2) 3	1	2	3	
Physical State	0 1 2 (3)	1	3	3	
Total Route Characteristics Score			7	15	
[3] Containment	0 1 2 (3)	1	3	3	3.3
[4] Waste Characteristics					3.4
Toxicity/Persistence	0 3 6 9 12 15 (18)	1	18	18	
Hazardous Waste Quantity	0 1 (2) 3 4 5 6 7 8	1	2	8	
Total Waste Characteristics Score			20	26	
[5] Targets					3.5
Ground Water Use	0 1 2 (3)	3	9	9	
Distance to Nearest Well/Population Served	0 4 6 (8) 10 12 16 18 20 24 30 32 35 40	1	8	40	
Total Targets Score			17	49	
[6] If line [1] is 45, multiply [1] x [4] x [5]. If line [1] is 0, multiply [2] x [3] x [4] x [5]			7140	57,330	
[7] Divide line [6] by 57,330 and multiply by 100	S_{gw} = 12.45				

GROUND WATER ROUTE WORK SHEET

Surface Water Route Work Sheet						
Rating Factor	Assigned Value (Circle One)		Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Release	(0)	45	1	0	45	4.1
If observed release is given a value of 45, proceed to line 4. If observed release is given a value of 0, proceed to line 2.						
2 Route Characteristics						4.2
Facility Slope and Intervening Terrain	0 1 2 (3)		1	3	3	
1-yr. 24-hr. Rainfall	(0) 1 2 3		1	0	3	
Distance to Nearest Surface Water	0 1 (2) 3		2	4	6	
Physical State	0 1 2 (3)		1	3	3	
Total Route Characteristics Score				10	15	
3 Containment	0 1 2 (3)		1	3	3	4.3
4 Waste Characteristics						4.4
Toxicity/Persistence	0 3 6 9 12 15 (18)		1	18	18	
Hazardous Waste Quantity	0 1 (2) 3 4 5 6 7 8		1	2	8	
Total Waste Characteristics Score				20	26	
5 Targets						4.5
Surface Water Use	0 (1) 2 3		3	3	9	
Distance to a Sensitive Environment	(0) 1 2 3		2	0	6	
Population Served/Distance to Water Intake Downstream	(0) 4 6 8 10 12 16 18 20 24 30 32 35 40		1	0	40	
Total Targets Score				3	55	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5				1800	64,350	
7 Divide line 6 by 64,350 and multiply by 100			S_{sw} =	2.80		

SURFACE WATER ROUTE WORK SHEET

Air Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
[1] Observed Release	(0) 45	1	0	45	5.1
Date and Location:					
Sampling Protocol:					
If line [1] is 0, the S_a = 0. Enter on line [5]. If line [1] is 45, then proceed to line [2].					
[2] Waste Characteristics					5.2
Reactivity and Incompatibility	0 1 2 3	1		3	
Toxicity	0 1 2 3	3		9	
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8	
	Total Waste Characteristics Score			20	
[3] Targets					5.3
Population Within 4-Mile Radius	0 9 12 15 18 21 24 27 30	1		30	
Distance to Sensitive Environment	0 1 2 3	2		6	
Land Use	0 1 2 3	1		3	
	Total Targets Score			39	
[4] Multiply [1] x [2] x [3]				35,100	
[5] Divide line [4] by 35,100 and multiply by 100		S_a = 0			

AIR ROUTE WORK SHEET

Fire and Explosion Work Sheet

NA

Rating Factor	Assigned Value (Circle One)	Multiplier	Score	Max. Score	Ref. (Section)
1 Containment	1 3	1		3	7.1
2 Waste Characteristics					7.2
Direct Evidence	0 3	1		3	
Ignitability	0 1 2 3	1		3	
Reactivity	0 1 2 3	1		3	
Incompatibility	0 1 2 3	1		3	
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8	
Total Waste Characteristics Score				20	
3 Targets					7.3
Distance to Nearest Population	0 1 2 3 4 5	1		5	
Distance to Nearest Building	0 1 2 3	1		3	
Distance to Sensitive Environment	0 1 2 3	1		3	
Land Use	0 1 2 3	1		3	
Population Within 2-Mile Radius	0 1 2 3 4 5	1		5	
Buildings Within 2-Mile Radius	0 1 2 3 4 5	1		5	
Total Targets Score				24	
4 Multiply 1 x 2 x 3				1,440	
5 Divide line 4 by 1,440 and multiply by 100			S_{FE} =		

FIRE AND EXPLOSION WORK SHEET

Direct Contact Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Incident	(0) 45	1	0	45	8.1
If line 1 is 45, proceed to line 4 If line 1 is 0, proceed to line 2					
2 Accessibility	(0) 1 2 3	1	0	3	8.2
3 Containment	(0) 15	1	0	15	8.3
4 Waste Characteristics Toxicity	0 1 2 (3)	5	15	15	8.4
5 Targets					8.5
Population Within a 1-Mile Radius	0 (1) 2 3 4 5	4	4	20	
Distance to a Critical Habitat	(0) 1 2 3	4	0	12	
Total Targets Score			4	32	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			60	21,600	
7 Divide line 6 by 21,600 and multiply by 100		S_{DC} =	0.28		

DIRECT CONTACT WORK SHEET